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AUTHOR Weinholtz, Donn; And Others
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ABSTRACT

A model for distinguishing effective and ineffective educational practices in experiential learning settings is described. The model is an adaptation of Hare's developmental phases of successful learning in classroom settings. During the orientation phase, the instructor communicates to learners what they are expected to accomplish. In the experiential learning setting, the acquisition phase involves reliance on a loosely-structured instructional scenario, whereby teachers take advantage of educational opportunities as they present themselves. During the practice phase of the experiential development model: (1) group members increasingly assume responsibility for initiating and maintaining activities related to their skill development; (2) the instructor maintains a low level of control; and (3) instructional activities occur outside of the work situation. The work phase involves the learner in using skills while pursuing tasks independent of the instructor's supervision. Finally, evaluation of individual and group performance occurs in the termination phase. The instructional leadership role and applications of the model to instructors on a medical service are discussed, along with further application of the experiential development model. (SW)

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A DEVELOPMENTAL MODEL FOR TEACHING IN EXPERIENTIAL LEARNING SETTINGS

Donn Weinholtz
College of Medicine
University of Iowa

Charles P. Friedman
School of Medicine
University of North Carolina
at Chapel Hill

Eugene R. Watson
School of Education
University of North Carolina
at Chapel Hill

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A Developmental Model for Teaching in Experiential Learning Settings

Donn Weinholtz
College of Medicine
University of Iowa

Charles P. Friedman
School of Medicine
University of North Carolina at Chapel Hill

Eugene R. Watson
School of Education
University of North Carolina at Chapel Hill

This article introduces a model for distinguishing effective and ineffective educational practices in experiential learning settings. Instructors in such settings might include clinical teachers in health care facilities, supervisors of student teachers in public schools, or individuals responsible for technical on-the-job training in a wide range of industries. This experiential development model has a theoretical base and is adaptable to many "real-life" educational settings. It contrasts in several ways with other experiential learning models which are more relevant to simulations and group experiences in which the instructor has a greater degree of control over learning situations.

Theoretical Background

In a field study of instruction by attending physicians in an internal medicine department at a major medical school, Weinholtz, Friedman and Mattern (1982) observed that learning by individual team members appeared tied to overall team development. Indeed, as individual team members learned, they appeared better able to contribute and use the contributions of others to their teams; and as teams developed their abilities to work together, they appeared to promote additional learning among their individual members. Thus, a theoretical perspective simultaneously addressing individual development and team development seemed most promising for examining teaching and learning on a medical ward team.

The literature on small group dynamics frequently deals with the interplay between group and individual development (Cartwright and Lippitt, 1978). Yet, because it focuses so heavily on therapy and training groups, much of this literature addresses psychosocial interactions that are not characteristic of the task-oriented learning group encountered in work settings, such as the medical ward team (Shambaugh, 1978). A helpful variation is offered by Hare (1976), who drew on the functional theory of groups developed by Parsons, Bales, and Shils (1953) to suggest that successful learning groups in classroom settings progress sequentially through five developmental phases.

The first phase, *orientation*, is that in which the instructor communicates to the learners, both explicitly and implicitly, what they are expected to accomplish during the lifetime of the group. This phase necessarily involves a certain amount of interpersonal exploration by both the instructor and the learners as they attempt to assess each others' capabilities and the evolving norms of the group.

The second phase, *acquisition*, involves close contact between the instructor and learners to introduce the process of acquiring a specified set of skills (e.g. cognitive, psychomotor, or interpersonal). During this phase, the instructor plays a focal role within the group by demonstrating skills, lecturing, and closely supervising the activities performed by the learners. The instructor dominates this phase, controlling events predominantly through a one-way flow of information. Unless he/she later provides less-dominating leadership, this phase is likely to promote dependence on the instructor that inhibits development of the learners' skills.

The third phase, *practice*, is a logical outgrowth of the second phase. It aims at developing the learners' skills more fully by transferring to them the responsibility of initiating and maintaining learning activities previously dominated by the instructor. Although the learners are still supervised, the instructor's direct control of events decreases substantially and the instructor gradually assumes the role of observer who provides feedback. This transference of responsibility to the learners plays a key part in their development as a group. It fosters interdependence among the group members, rather than continued dependence on the instructor. As long as the learners are delegated tasks which they are capable of completing, group cohesiveness is likely to be enhanced, thereby providing a supportive atmosphere for learning.

The fourth phase, *work*, involves the learners' using their individual and team skills while pursuing tasks independent of the instructor's supervision. This phase places the learners in the situation for which they have been trained. To the extent that the instructor observes or collects information on their performance, this phase provides opportunity for evaluation of the learners' achievement.

In the final stage, *termination*, all group members address the key issues that have arisen during the life of the group. This necessarily involves a final assessment by the instructor of each learner's performance, and may also include the instructor's assessment of overall group performance. The learners' assessments of instructor performance may also be shared. This review of past events occurs while members are emotionally disengaging from the group and anticipating their future activities.

Hare's Model Modified for Experiential Learning Settings

The sequential development model described by Hare is most directly applicable to classroom settings, in which an instructor can readily structure group experiences to help learners acquire specified knowledge, or a set of procedural skills. Within the typical classroom, the instructor maintains a very high degree of control over the nature and order of learning events encountered by the students. In contrast to such a controlled setting, experiential education as discussed in this paper responds to circumstances encountered in a natural environment, beyond the instructor's influence. Learning occurs as ongoing events force students to act or observe others act, and then experience or observe and reflect upon the consequence of the action (Coleman, 1976).

For example, the learning that occurs on a medical ward is fundamentally experiential, because it draws upon the daily work of patient care. While attending physicians have control over how time will be spent during attending rounds, they have little control over the patients whose conditions will determine the content of their teaching, and they have little direct opportunity to control team members' behavior throughout the remainder of the day. As clinical instructors, they attempt to shape education out of a set of relatively unpredictable events.

This characteristic of learning in "natural" experiential learning settings, and the corresponding impact on the instructor's ability to teach, suggests that groups in such settings cannot follow the same developmental sequence as that described by Hare for classroom settings. Figure 1 illustrates an adaptation of Hare's model to "natural" experiential learning settings. The five phases remain, but their interrelationships change from a strictly linear sequence to a more complex pattern.

Within this modification, the ongoing requirements of the work setting provide an encompassing phase affecting each of four other phases. Rather than being stable, discrete, and sequential, these other phases fluctuate in emphasis and overlap in occurrence. To the extent that there is a developmental sequence, it is cyclical or iterative in nature. Thus, the phases are demarcated in Figure 1 using broken lines and connected with a feedback loop. During a learning group's working life, there is a net flow of events from orientation to termination, but the daily encounters with work demands generate a recurring cycle of opportunities for acquisition and practice.

This experiential development model drawn from Hare's work can be further clarified by comparing it phase-by-phase with Hare's original development model for classroom groups.

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as interpreted here. Table 1 illustrates how learner development might take place in the classroom and "natural" experiential settings as predicted by each model. Specific emphasis is placed upon the behavior of the instructor.

While the orientation and termination phases of these two models include identical behaviors, important differences exist in the middle phases and most obviously in the work phase. In the classroom setting, the work phase is entered only after acquisition and practice have taken place. In the experiential setting, it is assumed that learners bring with them some skills that enable them to function in the setting. Actual work experiences occur before acquisition of further skills takes place, and the work phase is active throughout the life of the group. Due to the press of work demands, specific acquisition and practice activities can result only from a very conscious effort on the part of the instructor. Such an effort necessarily involves reliance on a loosely-structured instructional scenario, taking advantage of educational opportunities as they present themselves. This is a difficult instructional task, and experiential education in some setting may entirely lack distinctive acquisition and practice phases if the instructor does not assert influence. Under such circumstances, learners are left to their own devices to develop their skills.

Practice in Experiential Learning

Another point of departure for the experiential development model is the meaning of "practice." Practice is a logical developmental activity following acquisition of any skill. During the practice phase of the experiential development model: (1) group members increasingly assume responsibility for initiating and maintaining activities related to their skill development; (2) the instructor maintains a low level of control; (3) instructional activities occur outside of the referent (work) situation.

Although Hare (1976) does not address the issue specifically, there are several reasons why this type of practice opportunity is important to learner development. First, unless there are opportunities for learners to use their skills in the presence of—but independent of—intervention by the instructor, it will be difficult for the instructor to assess the extent to which learner performance is due to the learners' skill levels, or to the instructor's participation. The instructor may then be better able to determine what additional instruction is needed by the group members.

Second, unless practice occurs outside of the work environment, the instructor may have too little control to foster skill development in specific areas.

Third, practice opportunities may enhance both the confidence and sense of responsibility of the learners by providing them with opportunities to learn by doing, rather than by passively receiving information. Practice opportunities also provide a different context in which the skills initially developed during interactions with the instructor in the work environment may generalize to a wider range of stimuli. The value of practice for these purposes has long been stressed by educational psychologists (Belkin and Gray, 1977).

Fourth, during the life of any group, substantial dissatisfaction may result if there is continued domination of the group by the leader. Frustration might occur among group members from the failure of an instructor to recognize members' inclusion needs - need to be a member or to help others feel membership - and control needs - need to influence or accept influence from others (Schutz, 1966). By relinquishing some control of the team through the creation of practice opportunities, the instructor might address these needs, while fostering norms of active group participation and enabling group members to learn from each other. In this manner, manifest and latent conflict undermining the instructor's influence might be avoided.

Instructional Leadership Role

Typically, instructors in "natural" experiential settings have a dual function. They are supervisors who serve as heads of work groups and are expected to provide task-related leadership. They are also instructional leaders who are expected to promote participation in educational activities extending beyond the routing performance of work duties. Some of these instructors emphasize their supervisory activities while neglecting their instructional responsibilities. Such instructors may not find their teaching roles congenial, may be unaware of instructional possibilities, or may find no time for instruction given the press of recurring work activities. On the

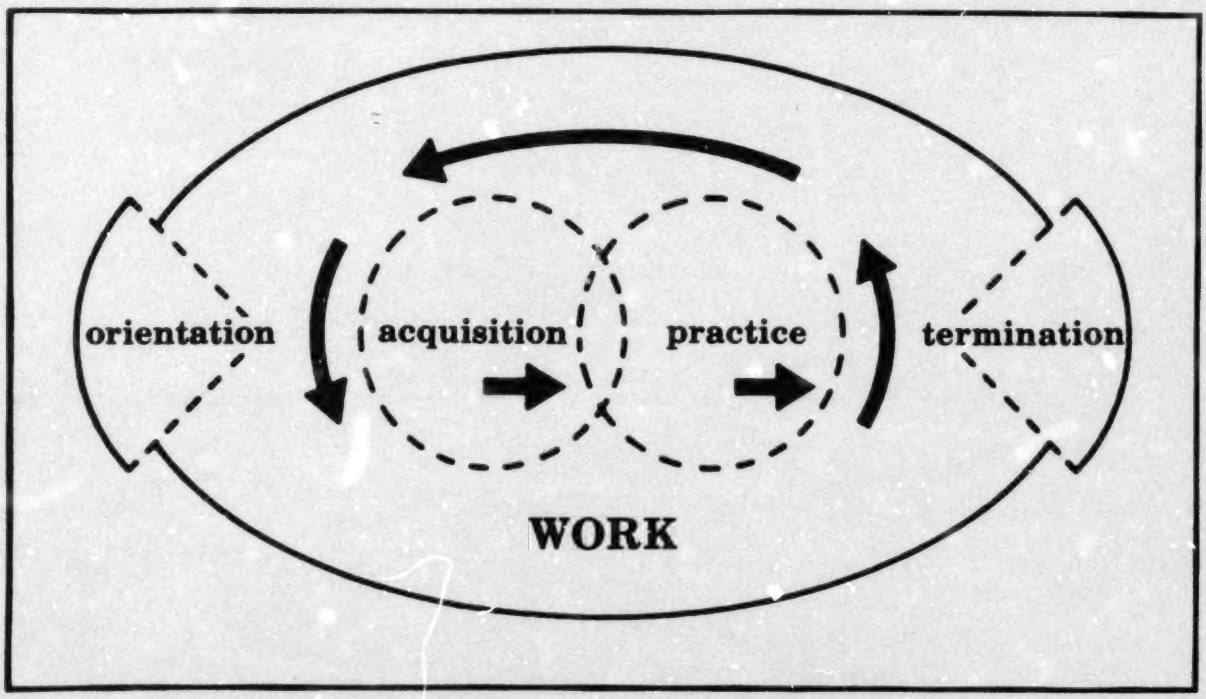

Figure 1. Experimental Development Model

Table 1
Learner Development in Classroom and Experiential Settings

	Classroom Sequential	Experiential-Iterative
Orientation	Teacher states goals and expectations for learner behavior	
Work	Not applicable	Learners assume assigned work tasks independent of teacher supervision.
Acquisition	Teacher becomes closely involved with learners as they work through a set of educational activities planned by the teacher.	Teacher becomes closely involved with learners, drawing on their work experiences (not directly shared by teachers) to obtain content for learning activities that can be loosely structured, but not rigorously planned.
Practice	Still *carefully planning* the sequence of activities teacher withdraws from focal leadership position; learners overcome their dependence on teacher; and thereby further dependence on teacher; and thereby further develop their skills and their ability to work together on planned activities.	Still *loosely structuring* the sequence of activities, teacher withdraws from focal leadership position; learners overcome their dependence on teacher; and thereby further develop their skills and ability to work together on encountered activities.
Work	Learners *assume* assigned work tasks independent of teacher supervision.	Learners *resume* assigned work tasks independent of teacher supervision.
Termination	Teacher and learners share their perceptions of each other's performance for purposes of evaluation.	

other hand, some instructors in these settings aggressively pursue strategies deliberately designed to develop learners' skills. These instructors also become deeply involved in their supervisory roles, but in doing so they discover, organize and lead instructional experiences (Weinholtz, 1981).

An example of this second type of instructor is the attending physician who spends a substantial amount of time personally monitoring the status of patients on a hospital ward rather than relying primarily on residents and interns to provide him with information on the patients' conditions. By becoming thoroughly familiar with each patient's problems, such an attending physician is likely to unearth a substantial number of instructional opportunities. Also, when dealing with residents and interns, the attending physician can teach during time that might otherwise have been spent requesting information on the patients.

Confronted with lesser instructional control in the face of pressing and often urgent work demands, an instructor in the "natural" experiential setting must rely more on personal and group influence to foster acceptance of his/her instructional activities than does the classroom instructor. This is because work and instruction compete for scarce time, and the instructor must steer the learning group towards involvement with learning potential that work demands alone do not necessarily require. The expert skill demonstrated by the instructor as a professional practitioner plays an important role in helping to establish the influence necessary for such efforts. Removed as they are from the referent situation, classroom instructors may never have occasion to demonstrate their competence as practitioners. Instructors in the "natural" experiential setting face a different situation. In their encounters with learners they play the dual role of teacher and work supervisor. They are immediately "tested" because the act of drawing education from the work setting demonstrates their competence as practitioners in that setting.

For example, an attending physician on an internal medicine ward may demonstrate a high degree of confidence in her subspecialty area (e.g. cardiology) while showing considerable doubt and hesitancy in dealing with pulmonary and cancer patients assigned to the ward. In this case, members of the team would probably pay careful attention to the attending physician's teaching on treating heart conditions, but might discount her instruction in the broad field of internal medicine (Weinholtz, 1981).

Interestingly, even when instructors in experiential settings do not aggressively incorporate instructional activities clearly tied to the five phases of the model, trainees learn much. The great strength of the experiential learning format is that learners continually encounter useful education opportunities in the course of their daily work responsibilities. For example, on a medical service, students have ample opportunities to acquire and practice certain skills (e.g. procedures and tests) under the supervision of interns and residents. The interns, likewise, can learn in a similar fashion from the residents, while the residents are able to develop new skills by carrying out their teaching responsibilities—all within the work milieu of patient care. The focal instructional issue is not whether learning will occur in the experiential setting, but rather the type and extent of additional learning that can be promoted by the leader (e.g. attending physician) with assigned responsibility for education).

Applications to Instructors on a Medical Service

Using ethnographic research methods to explore group processes in the work setting, Weinholtz, Friedman, and Mattern (1982) found that a wide variety of behaviors employed by attending physicians could be keyed to the phases of this experiential development model. Furthermore, substantial variation in teaching behaviors were found in all phases. Some of the possible examples are offered next.

During the orientation phase, the extent to which attending

physicians communicated their expectations to medical students at the beginning of a rotation affected the students' levels of anxiety and confusion. Among different attending physicians, there were extensive orientation sessions for students, brief sessions, and no sessions at all. Since expectations among attending physicians varied substantially, students indicated appreciation of comprehensive orientation sessions and acted on the basis of the information they received.

Another exemplary behavior was related to the acquisition phase. Attending physicians are expected to teach medical problem solving, but group discussions of medical problems can become extremely convoluted and difficult for medical students, and even interns, to follow. Consequently, some attending physicians adopted a simple strategy of listing on a chalkboard the different problems and elements pertaining to the diagnosis and management of certain complex cases. This strategy was uniformly applauded by medical students, interns and residents.

Some attending physicians allowed for "practice" during attending rounds by adopting a lower profile over time and delegating patient management discussions to their teams. By becoming observers of the group rather than controllers of the discussion, these attending physicians allowed the group to try its hand at solving problems, but were available to help if needed. Other attending physicians repeatedly dominated discussions throughout their month-long tenures with a ward team.

Finally, during the termination phase, some attending physicians made a conscious effort to discuss with team members their evaluations of the team members' performances during the month. Other attending physicians did not. Medical students, interns, and residents expressed their appreciation for such conversations, and their frustration with attending physicians who did not conduct them.

Further Application of the Experiential Development Model

Presently, this experiential development model has primarily heuristic value. As a normative model, it sets forth generic instructional events that should occur in "natural" experiential settings. The model might be used to organize findings from varied research efforts. In this manner, the challenges facing instructors in many types of experiential settings might be identified and distinguished from demands unique to particular settings. The model may be helpful in formulating propositions suitable for experimental testing, thereby allowing the validity of the model's underlying assumptions to be rigorously examined.

The ultimate impact of the model on practice will depend upon the value of its concepts as organizing principles for better understanding the dynamics of planned team development for experiential learning.

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PROFESSIONS EDUCATION RESEARCHER NOTES

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PERN

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Editor's Introduction

The Big Event cometh, AERA Chicago 1985!

Phil Bashook and Franklin Medio add to last issue's temptations with excerpts from their "Unofficial" guide to Chicago's best dining and entertainment. Carole Bland invites us all to a non-trivial evening - a Super College Bowl Trivia contest. And...oh yes, there's a program. Joe Sheehan's Program Committee has assembled an impressive assortment of intellectual temptations, including gourmet breakfast conversations for those mornings after the nights before. They come in a by-now-familiar centerfold tear-out section.

As if that weren't enough, Donn Weinholtz, Charles Friedman and Eugene Watson present and explain their model of teaching in experiential learning settings, which are common to professional education. Reed Williams and colleagues delineate the major research programs at Southern Illinois University School of Medicine's Department of Medical Education. And two book reviews, by Gerry Schermerhorn and Dale Dauphinee, give the scoop on books of interest to Division I members.

Speaking of Gerry Schermerhorn, I'd like to thank her for ably editing the last two issues of *PERN*. Both were excellent issues and I'm sure you'll join me in congratulating her and thanking her for her service to the Division. (How did she do it without a single typo?)

Terrill A. Mast
Editor

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Vice President's Update

My term as Vice President will end with the annual meeting in April. This is my last Update. During the past two years I have been fortunate to meet a variety of interesting and stimulating people while serving as your V.P. Thank you for giving me this opportunity.

The Division continues to grow and develop. During my tenure I have added two committees to strengthen our Division's activities. The Membership/Affirmative Action Committee under the leadership of **Dr. Elaine Romberg** has developed and implemented an outreach effort to attract educators to the Division from a wide range of professions. The Publications Committee chaired by **Dr. Gary Arsham** has been active in considering suggestions for monographs, the Newsletter, new Division publications and collaboration with other division's publications. I am pleased with these committees' activities and with the committee members' willingness to explore ways to enhance discussions and interaction among Division members. We can anticipate the Division will continue to benefit from their efforts. I also formed an ad hoc committee chaired by **Dr. Eta Berner** to consider developing divisional by-laws. Her committee will be reporting to the membership with proposed by-laws at the annual meeting.

Many have commented that the annual meeting program gets better each year. Our division has a reputation for high quality papers and symposia, interesting and innovative session formats and fun times during the meeting. Last year's program chair was **Dr. Lynn Curry**; this year it is **Dr. Joseph Sheehan** with **Dr. Carol Bland** as co-chair. Their hard work and success are most appreciated.

The **PERN** has become a "must read" under the guidance of **Dr. Terrill Mast**, the editor. The interesting articles and reports of research and development offices along with this annual meeting issue are both informative and very helpful. I find the **PERN** meeting issue replacing the thick AERA program for planning my time at meeting sessions. Interestingly, the other AERA divisions have incorporated a meeting schedule in their newsletters.

Just a reminder for those interested in our Division's affairs, the BUSINESS MEETING is MONDAY AFTERNOON from 4:05 - 6:05 p.m. in the State Ballroom of the Palmer House. I encourage you to join us to discuss current activities and future plans AND to meet the NEW Divisional Vice President.

Call for Papers

PERN hereby reissues its informal call for papers—brief reports of research-in-progress, reviews of a research field or methodology, integrative position statements, and book reviews. **PERN** also welcomes announcements of events or news relevant to Division I members, notices of career opportunities, and letters to the editor. The deadline for the Spring issue is May 15, 1985. Submit manuscripts, requests, or questions to . . . Editor Terrill A. Mast, Department of Medical Education, Southern Illinois University School of Medicine, P.O. Box 3926, Springfield, IL 62708.